great destroyer—man. Its history was complete. It appeared that originally 10*l.* were given for the ground on which to erect a cross for "poor people," who were to be exempt from tolls on the produce they brought into the city. This was a specimen of the early introduction of free-trade principles. Mr. B. then produced a drawing of the cross, and observed, that the clock and an inscription on it did no honour to it, and if they were removed, and the cross restored, it would be one of the most beautiful in the kingdom. Mr. B. then entered more fully into the history of crosses. Most of them had been erected between 1480 and 1520. The first had been built by Queen Ellinor, and the example had been imitated in many parts of the kingdom.

The Rev. Vernon Harcourt read a paper on ancient Celtic barrows, two of which are situated on a hill a few miles north-west of Chichester; and the Rev. Mr. Shiffner read an historical paper on St. Mary's Hospital, in Chichester, of which he is custos. The date when this ancient and curious edifice was built is unknown, but it is supposed to have been in 1229. It was erected for the reception of nuns. The inmates had two rooms each on each side of the refectory, the roof of which reached within six feet of the ground.

The meeting then adjourned to the cathedral, every part of which was visited by the members.

Mr. Brittoo's suggestion, that the cross should be restored, was taken up very warmly, and the excellent Mayor, Mr. Mason, at the dinner which followed, called on the town energetically to subscribe for that purpose. We hope, sincerely, that it may be effected.

As to the works now going on at the cathedral, we have received but an indifferent account. We shall seek an opportunity to visit the building.

BRITISH ARCHÆOLOGICAL ASSOCIATION

The council of the British Archæological Association have entered upon the preliminary arrangements for the approaching congress to be held in Warwick, and the town has been visited for that purpose by the general secretaries. A local committee has been formed to make preparations for the visit, and the mayor and corporation have placed at the disposal of the meeting the Town Hall, &c.; the County Hall, Museum, and Theatre, will also be at its service, if required. It will be presided over by the president, Lord Albert Denison Conyngham, and be patronized by Lord Brooke, Lord Leigh, Sir Charles Douglas, M.P., W. Collins, Esq., M.P., and others. The opening meeting will take place on Monday, the 19th of July, not the 26th, as at first advertised.

How the Romans Set to Work to Build a City.—"Great circumspection was used in the choice of a site for a city, and one of the methods adopted, previous to the forming of an encampment even, was the institution of religious rites, when the livers of the victims sacrificed were carefully examined, and if they were found diseased, others were subjected to the same test, in order to prove whether the unhealthy appearance resulted from accident. If the greater number of experiments proved healthy, it was considered that the water and soil were salubrious. When the external walls were built, the next object was the best means of disposing of the area between them; the streets were set out to exclude winds injurious to comfort, and all the sewers and drains were well considered. Their public buildings were established in convenient quarters, and their foundations made adequate to bear the weight placed upon them. Laws were established which prevented individuals from doing any thing which would interfere with the public health or enjoyment. These were the first and chief considerations. Every man in Rome had a cistern, and a constant supply of water for domestic purposes, as well as drains into the common sewer, which was discharged into the Tiber; and the whole was under the control and management of proper officers." With the exception of the discharge of the refuse into the Tiber, this was a system well worthy of imitation.—*Cressy before the Health of Towns' Commission.*

THE ARCHITECT'S CHARACTER.*

It is for the architect or engineer further to remember, that in the pursuit of his profession he must not be content with merely qualifying himself for the exercise of it, as the mechanic or the tradesman may regard his avocation. He should prepare himself for the society and connections, to which his engagements will necessarily introduce him. It must be his endeavour to fit himself by appropriate accomplishments for intercourse with those who will employ him. He will be called upon to be associated with gentlemen of rank, fortune, and influence, with the nobles of the land, and occasionally perhaps will be admitted into the presence of the sovereign. He will have to reside as architect for days, nay perhaps weeks together, at the country seats, which he may be called upon to alter or rebuild, in society of the most brilliant class. Is it not then proper, that he should maintain his intellectual position, as a man of general knowledge in literature and science, as well as that in architecture? The higher classes have most of them a highly-wrought education, and their very intercourse with the world developes their faculties in a very superior manner, even when early instruction may have been neglected. It is important, therefore, that the professional man should not limit his attention to the department of knowledge which he may profess. He must refine his literary taste; enlarge his acquaintance with history; and make himself master of the topics of the day. This must proceed with the early studies of his art, and he must occupy the many leisure spare hours he has, by reading in that class, which will relieve the tedium of close application to the dry details of professional practice. His ambition must be to be the agreeable, intelligent companion, nay the valued friend, of those whose interests he may be called upon to protect, and whose property he may be required to improve by the results of his skill and taste. He must strive to be considered as something more than the mere necessity of the moment, disregarded and thrown off, when the time for his employment shall have passed.

* From an interesting lecture "On the education and character of the Architect," by Professor Donaldson, appended to "Architectural Maxims and Theorems." Weale, Taylor and Weale, Lower street.

INSTITUTION OF CIVIL ENGINEERS.

STREET SWEEPING—SEA WALLS.

June 29th.—The president in the chair. This was the last meeting of the session, and several papers were read in abstract because there was not time for giving them in extenso.

The first was "On the advantages and economy of maintaining a high degree of cleanliness in roads and streets; with an account of the construction and operation of the street-sweeping machine, by Mr. J. Whitworth.

It treated of the general advantages of street cleanliness, the comfort of the pedestrian, the avoidance of impurity to the air from the decomposition of dirt on the pavement; less dirt and dust being carried into the houses, a saving in the cost of maintenance of roadways, and a diminution of the draught of carriages. The annoyances of the common method of cleansing were then detailed—with the importance of employing plenty of water in the cleansing of streets, to liquify the mud, to cause the dirt to swell and rise from between the stones, to cool and purify the air during hot weather, and to prevent the dust from being driven into the dwellings. It then shewed how much economy there resulted from having force enough to cleanse the streets thoroughly and simultaneously in wet weather, particularly by Whitworth's sweeping-machine, which is a cart drawn by one horse and managed by one man; it has on one of the wheels a toothed wheel working into a pinion, which gives motion to a drum over and around which passes two endless chains passing also around another drum at the lower extremity of a light frame suspended at the tail of the machine, over an inclined plane depending from the drum frame; these endless chains carry a series of broad brushes formed of an Indian rush of peculiarly elastic and durable nature; they travel at a velocity depending upon the speed of the horse, and impinging upon the ground with a force which is regulated by a coiled spiral spring, carry the dirt up the inclined plane into the cart, whence it is emptied when the receptacle is full.

The next paper read, was "An account of the sea defences of Romney Marsh, commonly known by the name of Dymchurch Wall, and the probable origin of the Marsh itself, or the manner in which it was reclaimed from the sea," by Mr. James Elliot, Jun., the resident engineer.

Romney Marsh, properly so called, forms a triangle, the base of which would be a line drawn from Romney to Appledore, and the apex at Hythe, and comprises about 24,000 acres. It is probable, that this marsh was caused in the first instance by the formation of a natural barrier of shingle, nearly where Dymchurch Wall now stands, by which the sea was excluded, and that the first artificial works were executed by the Romans, when they held possession of the country. They consisted of the erection of cross walls running from the natural barrier (the "Full") to the hills, at the base of which the ancient river Limene ran. The chief of these (the Rhee Wall), ran nearly in a straight line from Romney to Appledore, and it was at that spot where probably the main work was performed.

Upon the supply of shingle from the west being cut off by the extraordinary accumulation at Dungeness Point, the natural barrier at Dymchurch gradually became weakened, and it was necessary to take some steps to prevent its total destruction; the first measure adopted was the erection of an inland wall at some little distance, at the back of the "Full," and afterwards, the construction of large stone groins on this point or sea-side, at right angles to the line of coast, in order to increase the deposit of shingle. However, as the supply of shingle gradually decreased, on account of the constant movement to the eastward, and as all that escaped in that direction was permanently lost, these means were found insufficient, and a system of "arming," with brushwood and timber-piling was adopted. This was found to answer the purpose for a considerable period, but it also, in the course of time, gradually became insufficient; and it was found necessary, at length, after numerous experiments, to adopt a stone facing with an average slope of about eight to one, up to high-water mark, gradually increasing in steepness from that point, and terminating in a curve of seven feet radius. The stones, which were laid in a bed of concrete, where they were most affected by the waves, were of different sizes, averaging from eighteen to six inches in depth, the largest of them being in the middle, where the greatest wear and tear took place, and at which place rows of sheet piling were also driven for additional security.

This plan was adopted by the author after mature deliberation on the reports of Mr. Rennie and Mr. Walker, and a very careful examination of the locality. Part of the wall has now been standing for ten years, and has required a very trifling amount of repair, while the annual expense has been reduced from 10,000*l.* to 4,000*l.*, with every prospect of a still further reduction being effected, as upwards of two-thirds of the work are now permanently completed.

The last paper was, "On Ocean Steam Navigation," by Captain Henderson, calling attention to the fact, that in this great maritime nation, naval architecture was neglected as a science, as was proved by the experimental squadrons and some of the ordinary steam-vessels lately built. Neither the public nor science had derived any advantage from these costly experiments, owing to the absence of any information, in a systematic form, that correctly described the relative size, capacity, resistance, power, or speed of steam-ships; the present tonnage and nominal horse-power, for all purposes of analogy, being quite fallacious.

The meeting was then adjourned until the second Tuesday in January, 1849.

Almshouses for Printers.—The subscribers to the Printers' Almshouse Fund have determined on purchasing a plot of ground at Wood Green, Hornsey, adjoining that of the fishmongers and poulterers, for 450*l.*, and to erect thereon six almshouses, containing two rooms each, to accommodate twelve persons and their wives, with library, &c. It has been suggested to the Caxton Fund Committee to erect their monument in the quadrangle of the above institution.